Today's Topics:
                         455KHz IFs (continued..)
                          ARRL NR 83: JAS-1 DEAD
                           Ear Mike from Telex
                       FOR SALE, Two Meter, Allmode
                        Great Circle, No Graphics
                    Havana Moon's "Los Numeros" On-Line
                        starter shortwave radios ...
                          TM-721A upgrade info

Date: 9 Nov 89 09:32:23 GMT
From: omen!caf@uunet.uu.net (Chuck Forsberg WA7KGX)
Subject: 455KHz IFs (continued..)

Another reason for the lower IF frequency in car radios was that
they use to be permeability tuned (variable inductors instead of
variable caps) and tracking was easier with the lower IF. This
was long before transistors made it to car radios.

You could rewire a tube car radio into a 6 meter
transceiver without too much trouble.

Date: 8 Nov 89 22:05:54 GMT
From: n8emr!gws@tut.cis.ohio-state.edu (Gary Sanders)
Subject: ARRL NR 83: JAS-1 DEAD

==
| Relayed from packet radio via |
| N8EMR's Ham BBS, 614-457-4227 (1200/2400/19.2 telebit,8N1) |
==

ARRL BULLETIN NR 83 (ARLB083) 11/8/89

THE OPERATION OF AMATEUR SATELLIE JAS-1/FUJI-OSCAR 12 WAS TERMINATED,
EFFECTIVE NOVEMBER 5, BECAUSE OF LOW POWER GENERATION.

JARL REPORTS QUOTE, IT IS OUR GREAT PLEASURE TO REALIZE THAT WE WERE
ABLE TO PROVIDE CHANCES OF SATELLITE COMMUNICATION, ESPECIALLY THE
FLYING BBS, AND, TAKING THIS OPPORTUNITY, WE THANK ALL SATELLITE
ENTHUSIASTS FOR HAVING CONTACTED THE BIRD. NOW, WE ARE PREPARING
THE NEXT BIRD, JAS-1B, AS THE SUCCESSOR OF FO-12, WHICH HAS THE SAME
MISSION CONFIGURATION AS THAT OF FO-12 EXCEPT FOR ITS ORBIT. PLEASE
LOOK FORWARD TO ITS LAUNCH IN FEBRUARY 1990. UNQUOTE. AR

--
Gary W. Sanders (gws@n8emr or ...!osu-cis!n8emr!gws), 72277,1325
N8EMR @ W8CQK (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]
HAM/SWL/SCANNER BBS (1200/2400/PEP) 614-457-4227

Date: Thu, 09 Nov 89 04:53:13 EST
From: Chris Allison <CHRIS%MIAMIU.BITNET@CORNELLC.cit.cornell.edu>
Subject: Ear Mike from Telex

     I have just seen an ad from Telex about a product called Ear-Mike.
It is a speaker/mike built into an ear peace that is connected through
an adapter to your radio. It is reported to be good in high noise areas.
Has anyone seen one of these? What is the sound quality like (talking through
my ears - seems like it should sound different)?

Chris Allison N8DSC

Date: 9 Nov 89 03:07:57 GMT
From: attctc!jolnet!arf@tut.cis.ohio-state.edu (Jack Schmidling)
Subject: FOR SALE, Two Meter, Allmode

ats/e12

FOR SALE: TWO METER ALL MODE

Kenwood TS700A, two meter transceiver.
AM/FM, CW/SSB 10 Watts.
Built-in receive pre-amp and PLL.
Includes Hustler GS-7, 7db gain vert antenna.
$300 takes all.

Jack Schmidling arf@jolnet.ORPK.IL.us

Date: 9 Nov 89 03:34:29 GMT
From: attctc!sampson@tut.cis.ohio-state.edu (Steve Sampson)
Subject: Great Circle, No Graphics

Here's a program that some may find useful, others will want to hit 'n'...

```
/*
 *   gc.c
```

```
 *
 *   Great Circle.  This program is used to determine bearing
 *   and range to a station given latitude and longitude data.
 *
 *   Ver 1.01 By S. R. Sampson, N5OWK
 *   Public Domain (p) November 1989
 *
 *   Ref: Air Force Manual 51-40, "Air Navigation", 1 February 1987
 *
 *   Usage examples:
 *
 *   gc 35.19n97.27w 0s0e          (Moore to Greenwich U.K.)
 *   gc 35.19N97.27W 38.51n77.02W    (Moore to Washington D.C.)
 *   gc 33.56n118.24w 55.45n37.35e   (L.A. to Moscow U.S.S.R.)
 */

/* Includes */

#include <stdio.h>
#include <string.h>
#include <ctype.h>
#include <math.h>

/* Defines */

#define   RADIAN    (180.0 / M_PI)

/* Globals */

double    tmp,
     dist,
     range,
     bearing,
     QTH_Lat,
     DEST_Lat,
     QTH_Long,
     DEST_Long,
     Delta_Long;

/* Simple Declare, No Prototypes */

/*
 *   Error routine
 */

void err(type)
int  type;
{
```

```c
        switch(type)  {
        case 1:
            printf("\007Latitude Out of Range (90N to 90S)\n");
            break;
        case 2:
            printf("\007Longitude Out of Range (180W to 180E)\n");
            break;
        case 3:
            printf("\007Minutes Out of Range (0 to 59)\n");
        }

        exit(1);
}

/*
 *   Convert Degrees and Minutes to Decimal
 */

double dm2dec(n)
double    n;
{
        double    t;

        t = (int)n;
        n -= t;
        n /= .60;

        if (n >= 1.0)
            err(3);

        return (n + t);
}

/*
 *   Parse the input line
 *
 *   dd.mm[NnSs]ddd.mm[EeWw]
 */

void parse(s, lat, lon)
char *s;
double    *lat, *lon;
{
        register char *i, *t;
        int        l;

        l = strlen(s);
        for (i = s; i < (s + l); ++i)  {
```

```
            switch(toupper(*i))  {
            case 'N':
                  *i = '\0';
                  t = i + 1;
                  *lat = atof(s);
                  break;
            case 'S':
                  *i = '\0';
                  t = i + 1;
                  *lat = -atof(s);
                  break;
            case 'E':
                  *i = '\0';
                  *lon = -atof(t);
                  break;
            case 'W':
                  *i = '\0';
                  *lon = atof(t);
            }
      }

      *lat = dm2dec(*lat);
      *lon = dm2dec(*lon);

      if (*lat > 90.0 || *lat < -90.0)
            err(1);

      if (*lon > 180.0 || *lon < -180.0)
            err(2);
}

main(argc, argv)
int  argc;
char *argv[];
{
      if (argc != 3)  {
            printf("Usage: gc station1 station2\n\n");
            printf("This program computes Great Circle Bearing and Range\n");
            printf("Given the Latitude and Longitude  (Degrees and Minutes)\n\n");
            printf("You must input the Lat/Long of the two stations\n");
            printf("The output will be relative to the first Coordinate\n\n");
            printf("Input the two station Lat/Longs using the following format:
\n\n");
            printf("\tdd.mmHddd.mmG  Lead/Lagging Zeros can be left out\n\n");
            printf("d = Degrees, m = Minutes, H = Hemisphere (N or S), G = Greenwich
(W or E)\n");

            exit(1);
```

```
        }

        /* Process the command line data */

        parse(argv[1], &QTH_Lat, &QTH_Long);
        parse(argv[2], &DEST_Lat, &DEST_Long);

        /* Compute the Bearing and Range, From the Formula in Chapter 23 */

        Delta_Long = DEST_Long - QTH_Long;

        QTH_Lat    /= RADIAN;   /* Convert variables to Radians */
        QTH_Long   /= RADIAN;
        DEST_Lat   /= RADIAN;
        Delta_Long /= RADIAN;

        tmp = (sin(QTH_Lat) * sin(DEST_Lat)) +
            (cos(QTH_Lat) * cos(DEST_Lat) * cos(Delta_Long));

        dist = acos(tmp);
        range = 60.0 * (dist * RADIAN);

        tmp = (sin(DEST_Lat) - (sin(QTH_Lat) * cos(dist))) /
            (sin(dist) * cos(QTH_Lat));

        bearing = acos(tmp) * RADIAN;

        if (Delta_Long > 0.0)
            bearing = 360.0 - bearing;

        /* Computations complete, show answer */

        printf("\nBearing is %.0f Degrees for %.0f Nautical Miles\n",
            bearing, range);

        exit(0);
}

/* EOF */
```

In article <23733@cup.portal.com> Havana_-_Moon@cup.portal.com writes:

>   ** WHO IS HAVANA MOON? **

>   Havana Moon is the pseudonym of a very well known figure in
>   Shortwave Radio, on both the hobby and the professional levels.
>   He is a former Intelligence Officer who is acknowledged to be
>   one of the leading experts in the curious shortwave phenomenon
>   known as "Spy Numbers Transmissions."

What is Spy Numbers Transmissions?

-- Brad

*
*
*
*
* * * * *

Date: 9 Nov 89 09:35:43 GMT
From: sdcc6!sdcc10!muller@ucsd.edu (Keith Muller)
Subject: starter shortwave radios ...

There are two types of markets:
1) DX radios for grabbing those "down in the mud" signals
2) Hi-fi radios for quality audio

Obviously it is hard for a radio to do both well. Lower cost radios
do either 1 or 2 well but not both (usually). Higher cost radios add
electronics to improve either 1 and/or 2, but even then doing both
is hard.

For example take the Sony 2020 (aka 2001D outside of the USA). It is great
DX radio for it's price, but it audio quality is far from Hi-Fi even
on the best of signals. The Grundig 650 is great for Hi-FI, but it is
not in the same class as the Sony 2010 for weak signals.

For a first time radio one nice choice is the Sangean ATS-803A (aka radio shack
DX-440, eska RX 33). It is not the DX performer the sony is but is close.
It has much better audio. (The FM stereo output is pretty good). And it
costs a lot less ($180 USA versus $350+ USA).

If cost is no object then the Grundig 650 for Hi-FI on strong signals. The
kenwood R-5000, JRC NRD-525 or the Icom R9000 are good at DX (and good
audio on the R-5000). The R9000 is looks awesome in the ad's, though I
have never seen one in person. The icom R-71a used to be good, but
the newer serial numbers in the USA show several problems. JRC radios

are built like battleships, though the performance is not up to same
level as similar priced radios in some respects.

For used radios. Drake R-7 and similar models should be kicking around.
Drake made some really good radios even at todays standards. I have no idea
what they go for now.

My favorite of the group is the Kenwood R-5000. It has the DX performance
and I can listen to music on it for hours. Listing to a strong music
station on the Sony 2010 is hard on the ears.

    Keith Muller
    University of California
    muller@ucsd.edu

Date: 8 Nov 89 17:07:07 GMT
From: ibmarc!singer@uunet.uu.net (David Singer)
Subject: TM-721A upgrade info

Do you know when the upgrade will be available?

David Singer, N6TFX   Internet: singer@ibm.com
                       Packet: n6tfx @ n6ldl
                       Amprnet: n6tfx@n6tfx.ampr.org
                       Bitnet: singer@almvma

End of INFO-HAMS Digest V89 Issue #858
****